No. 658,276. Patented Sept. 18, 1900.

J. S. McCARISTON.

ROD JACK.

(Application filed Nov. 24, 1899.)

(No Model.)

Fig. 2.

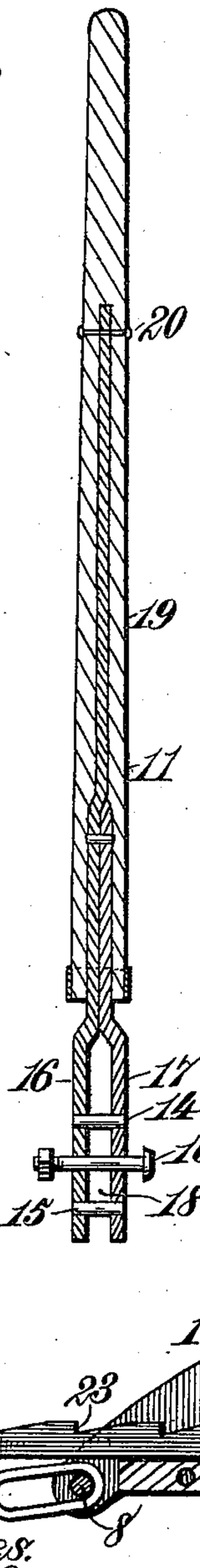

Fig. 1.

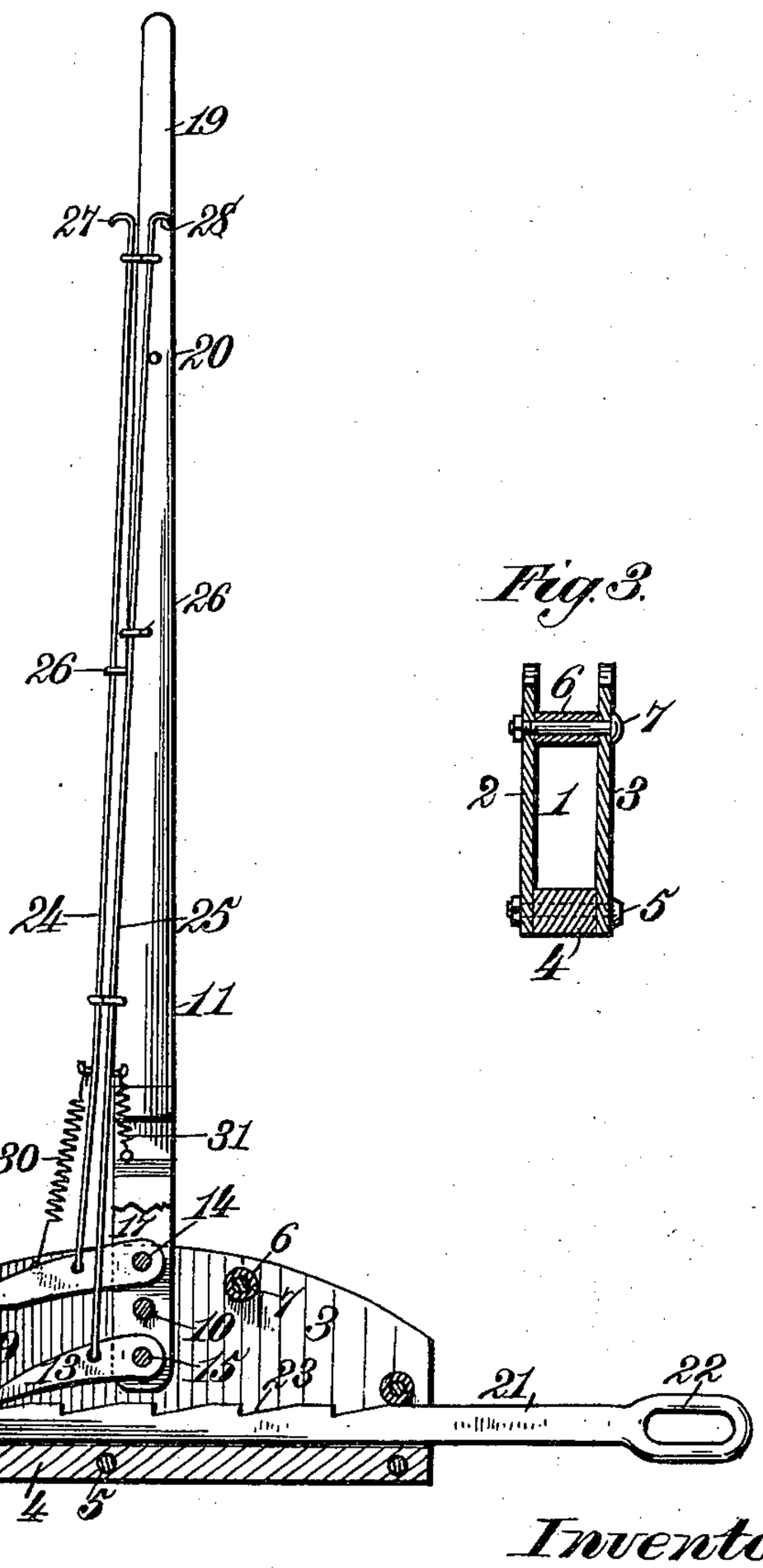

Fig. 3.

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UNITED STATES PATENT OFFICE.

JAMES S. McCARISTON, OF CORNING, OHIO.

ROD-JACK.

SPECIFICATION forming part of Letters Patent No. 658,276, dated September 18, 1900.

Application filed November 24, 1899. Serial No. 738,208. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. MCCARISTON, a citizen of the United States, residing at Corning, in the county of Perry and State of Ohio, have invented new and useful Improvements in Rod-Jacks, of which the following is a specification.

My invention relates to a rod-jack.

In an oil-field where there are quite a number of wells it is usual to have a central power plant and a series of surface rods running therefrom to the pumps of the various wells, whereby said pumps may be actuated. In practice these surface rods break or get out of order, and it requires the expenditure of considerable force to bring the disunited ends together, owing to the fact that in order to pull the surface rod the sucker-rod in the well must be lifted at the same time. This is frequently accomplished by the use of a team of horses and a block and tackle.

It is the object of my invention to provide a device which may be readily operated by a single person and yet be capable of producing sufficient power for the work indicated or for such work as raising or lowering the sucker-rods, shortening or lengthening the surface rods, pulling the working valves out of the working barrel, stretching the surface rods when starting a well to pump, and like applications.

To this end my invention consists in a novel rod-jack having the features of construction and operation of parts hereinafter indicated.

I have illustrated my invention in the accompanying drawings, in which—

Figure 1 is a view in sectional elevation of the complete device. Fig. 2 is a detail sectional view of the lever-arm, and Fig. 3 is a transverse section of the box.

Referring now to the drawings, the numeral 1 indicates what I term the "box," which comprises two side members 2 and 3, of steel, held in spaced parallel relation at their bottom by means of a strip of hard wood 4, these parts being firmly locked or fastened together by means of bolts 5 passing through the steel plates or side members 2 3 and said hard-wood strip. The side members are relatively high or have their greatest width near their longitudinal center, while they taper off or become narrower toward each end. I further brace these plates in spaced parallel relation by means of short sections of pipe 6, which are located between the side members 2 3, near the top edge thereof, at one end of box 1, and through which extend bolts 7 for drawing the plates or side members firmly against the ends of these pipe-sections. At the opposite end of the device from that to which attention has just been called I secure in the plates 2 3 a heavy pin 8, on which is a link 9 to provide means for anchoring the jack. Fulcrumed at a short distance from its lower end on a fulcrum-pin 10, extending through the sides 2 and 3 of the box, is a lever 11. The lower portion of this lever is bifurcated to afford a working space for two dogs 12 and 13, located on opposite sides of the fulcrum-pin 10 and pivotally mounted, respectively, on pins 14 15, secured in the two legs 16 17 of said bifurcated portion. After extending parallel for some distance to afford the space 18 for the dogs 12 and 13 to work in the said legs 16 and 17 are brought together and secured by any suitable means, such as by riveting or bolting them together, and one of these legs 16 is continued beyond the upper end of leg 17 and is received into a stout wooden handle 19, its upper end being apertured, whereby a bolt 20 may be passed through the wooden handle and said aperture. The legs 16 and 17 of the lever-arm and the extensions of such legs are of cast-steel, the legs themselves being flat, as shown. The wooden handle 19 may extend down to the bifurcated portion of the lower arm, as shown, thus embracing or inclosing the extensions of both leg 16 and leg 17.

Supported upon the bottom 4 of the box 1 is a draw-bar 21, having an eye 22, by means of which it may be connected with the surface rod or the like to be pulled. This bar is provided on its upper side with a series of teeth 23, which are adapted to be engaged by the lower pointed ends of the dogs 12 13. The dog 12 is of course much longer than dog 13, and as these dogs are on opposite sides of the fulcrum-pin 10 it will be seen that they will each in turn alternately engage and ride over the teeth 23 as the lever 11 is pushed or swung back and forth, and as one or the other of the dogs engages the teeth 23 in the movement in either di-

rection of the lever-arm it is clear that the draw-bar 21 will be moved constantly in the direction indicated by the arrow.

In order to lift the dogs 12 and 13 when it is desired to withdraw the draw-bar from the box 1, I provide wires 24 25, which are connected, respectively, to the tops of the dogs 12 and 13 and, extending through keepers 26, provided at proper intervals along the lever-arm, are provided at their upper end with finger-holds or grips 27 28, by means of which the dogs 12 13 may be readily raised, as will be seen. I provide for holding the dogs in a locked elevation after they have once been raised till it is necessary they should be brought into play. To this end I provide on the under side of the dog 12 a recess 29. By raising the dog 13 it will engage the under side of and raise dog 12, and when its pointed end reaches the recess 29 it will pass into the same, and by releasing its wire both dogs will be held locked in an elevated position. By throwing the lever 11 forward the dogs will be automatically released from this engagement and will be free to resume their normal positions. In order to insure that the dogs shall always engage with the teeth 23, I secure to each of the wires 24 25 a coiled spring 30 31, respectively, the lower end of spring 30 being secured to the side 2 of the box, as shown, while the lower end of spring 31 is secured to the lower end of the lever.

By the arrangement of dogs shown the draw-box 21 will not only be forced forward in the movement in either direction of the lever 11, but these dogs will operate to lock the said lower arm in any position to which it may be moved.

Having thus fully described my invention, what I claim as new is—

1. A rod-jack comprising the stationary box 1, a toothed draw-bar located therein, a lever fulcrumed in said box, dogs pivotally mounted on said lever on opposite sides of its fulcrum-point and working within said box and adapted to engage with the teeth of said draw-bar for moving said bar bodily through the box, and means for anchoring said box, substantially as described.

2. A rod-jack comprising the box 1, a toothed draw-bar working therein, a lever fulcrumed in said box, dogs pivotally mounted on said lever on opposite sides of its fulcrum-point and adapted to engage with the teeth of said draw-bar, a wire secured to each dog and extending along and working in guides on said lever, a coiled spring secured to each of said wires one of said springs being secured at its lower end to said box and the other of said springs having its lower end secured to said lever, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JAMES S. McCARISTON.

Witnesses:
NELSON D. WELLS,
GOTLIEB KELLER.